

## MICROOPTO MOS 24VDC/12-300VDC 1A

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
www.weidmueller.com



The MICROOPTO 300 V DC solid-state relay has been developed as a switching amplifier for high inductive loads up to 300 V DC and 1 A in motor brakes and contactors.

A power boost in the load circuit compensates transient overloads (20 A for 20 ms / 5 A for 1 s) such as start-up or shut-down spikes. Additional protective circuits counter higher overloads.

### General ordering data

Type	MOS 24VDC/12-300VDC 1A
Order No.	<a href="#">8937830000</a>
Version	MICROOPTO, solid-state relays, 1 NO contact (POWER MOS-FET), Rated control voltage: 24 V DC $\pm 20\%$ , Rated switching voltage: 12...300 V DC, Continuous current: 1 A, Screw connection
GTIN (EAN)	4032248716050
Qty.	1 pc(s).

Creation date April 27, 2020 3:45:04 PM CEST

Catalogue status 17.04.2020 / We reserve the right to make technical changes.

**MICROOPTO  
MOS 24VDC/12-300VDC 1A**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com

**Technical data****Dimensions and weights**

Width	6.1 mm	Width (inches)	0.24 inch
Height	88.1 mm	Height (inches)	3.468 inch
Depth	97.8 mm	Depth (inches)	3.85 inch
Net weight	37 g		

**Temperatures**

Humidity	5-95% relative humidity, T <sub>u</sub> = 55°C, without condensation	Operating temperature, max.	60 °C
Operating temperature, min.	-25 °C	Storage temperature, max.	80 °C
Storage temperature, min.	-40 °C	Operating temperature	-25 °C...60 °C
Storage temperature	-40 °C...80 °C		

**Probability of failure**

MTTF	467 Years
------	-----------

**Environmental Product Compliance**

REACH SVHC	Lead 7439-92-1
------------	----------------

**Control side**

Rated control voltage	24 V DC ±20 %	Power rating	0.36 W
Cut-in / dropout voltage	18.8 V / 14.7 V DC	Status indicator	Green LED
Protective circuit	Varistor, Reverse polarity protection		

**Load side**

Rated switching voltage	12...300 V DC	Continuous current	1 A
Max. switching current	1,5 A	Load category	LC A
Pulse load, max. current	27 A (10 ms)	Switch-on delay	< 18 µs
Switch-off delay	< 1 ms	Voltage drop at max. load	≤ 0.4 V
Leakage current	< 1 µA	Short-circuit-proof	No
Protective circuit, load side	Varistor, Free-wheeling diode	max. switching frequency (DC control voltage)	60 Hz

**Contact data**

Contact type	1 NO contact (POWER MOS-FET)
--------------	---------------------------------

**General data**

Rail	TS 35	Colour	black
UL 94 flammability rating	V-0		

**MICROOPTO  
MOS 24VDC/12-300VDC 1A**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com

**Technical data****Insulation coordination**

Rated voltage	300 V	Pollution severity	2
Surge voltage category	III	Clearance and creepage distances for control side - load side	> 3 mm
Dielectric strength for control side - load side	3 kV <sub>eff</sub> / 1 Min.	Dielectric strength to mounting rail	4 kV <sub>eff</sub> / 1 Min.
Impulse withstand voltage	2.5 kV (1.2/50 µs)	Protection degree	IP20

**Further details of approvals / standards**

Standards	DIN EN 50178, GL 2003-VI-Abs. 9, IEC 62314, UL508	Certificate No. (DNVGL)	TAE000033E
Certificate No. (GERMILLOYD)	54853-08	Certificate no. (cULus)	E141197

**Connection data**

Wire connection method	Screw connection	Stripping length, rated connection	7 mm
Tightening torque, min.	0.4 Nm	Tightening torque, max.	0.6 Nm
Clamping range, rated connection	2.5 mm <sup>2</sup>	Clamping range, min.	0.5 mm <sup>2</sup>
Clamping range, max.	4 mm <sup>2</sup>	Wire cross-section, solid, min.	0.5 mm <sup>2</sup>
Wire cross-section, solid, max.	4 mm <sup>2</sup>	Wire connection cross-section, finely stranded, min.	0.5 mm <sup>2</sup>
Wire connection cross section, finely stranded, max.	2.5 mm <sup>2</sup>	Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min.	0.5 mm <sup>2</sup>
Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max.	1.5 mm <sup>2</sup>	Conductor cross-section, flexible, AEH (DIN 46228-1), min.	0.5 mm <sup>2</sup>
Conductor cross-section, flexible, AEH (DIN 46228-1), max.	1.5 mm <sup>2</sup>	Blade size	0.6 x 3.5 mm

**Classifications**

ETIM 6.0	EC001504	ETIM 7.0	EC001504
eClass 9.0	27-37-16-04	eClass 9.1	27-37-16-04
eClass 10.0	27-37-16-04	UNSPSC	30-21-18-01

**Product information**

Product information The cable lengths must not exceed 30 m.

**Approvals**

Approvals



ROHS Conform

**Data sheet****MICROOPTO  
MOS 24VDC/12-300VDC 1A**

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
www.weidmueller.com

**Technical data****Downloads**

Approval/Certificate/Document of Conformity	<a href="#">EU Konformitätserklärung / EU Declaration of Conformity</a>
Brochure/Catalogue	<a href="#">CAT 4.2 ELECTR 18/19 EN</a>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
Engineering Data	<a href="#">STEP</a>
User Documentation	<a href="#">Beipackzettel / Package Insert – multilingual</a>

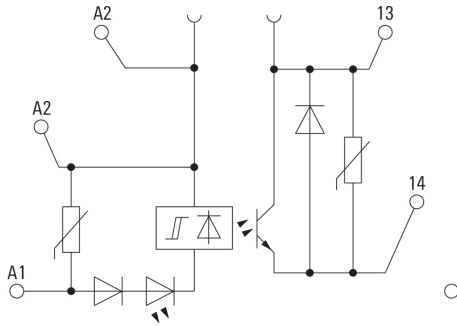
**Data sheet**

**MICROOPTO  
MOS 24VDC/12-300VDC 1A**

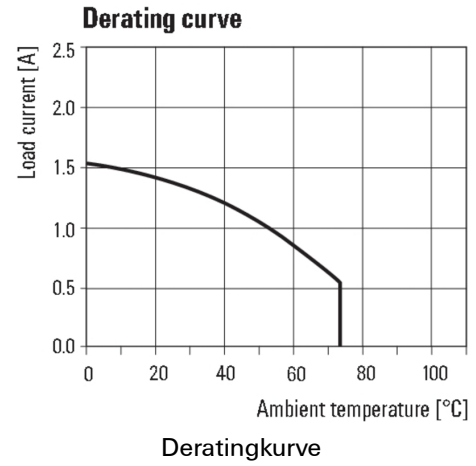
**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com

**Drawings**

**Wiring diagram**



**Graph**



**Dimensional drawing**

